# Big Hole River Drought Management Plan Version 2022

Protecting the Big Hole River fishery during drought with voluntary conservation & state enforced fishing restrictions





# Shared Sacrifice, Shared Success

# Big Hole River Drought Management Plan



# **BIG HOLE** WATERSHED COMMITTEE Conservation Through Consensus.



The Big Hole River Drought Management Plan (DMP) coordinates conservation measures during periods of drought to protect the fishery. The plan sets flow and water temperature targets on the mainstem Big Hole River, which is divided into five river sections supported by a network of Real-time USGS and DNRC measurement stations (gages). In a drought year, the plan begins with voluntary conservation measures by river users, particularly irrigators. The model promotes working together voluntarily to prevent stress on fish during drought.

When conditions worsen beyond voluntary conservation targets, state-managed fishing restrictions are implemented and enforced by Montana Fish, Wildlife and Parks. Fishing restrictions can be triggered by high water temperatures, low streamflows, or both. Re-opening criteria vary by river section and can be found in the DMP.

The DMP was created in 1997 by the Big Hole Watershed Committee (BHWC) and its many technical advisors and partners. It is implemented in partnership between the Big Hole Watershed Committee, Montana DNRC, and Montana Fish, Wildlife and Parks. The Drought Management Plan is reviewed annually and as needed by the Big Hole River Drought Subcommittee, a team of conservationists, irrigators, sportsmen, and agency personnel coordinated by BHWC.

#### **River Conditions and Drought Management Plan Information**

https://bhwc.org/river-conditions (or scan QR code to right with your phone's camera)

Real-time Big Hole River conditions



Map of Drought Management Plan sections and current status by section

Drought Management Plan documents

Stream Flow and Snowpack Forecasts

#### Get Updates by E-Mail

Visit bhwc.org to Sign Up for Email Updates

Request sign-up by email at info@bhwc.org

#### Contact Us:

Big Hole Watershed Committee P.O. Box 21, Divide, Montana 59727 406-960-4855 <u>info@bhwc.org</u> Text "bighole" to 26989

Big Hole River Drought Management Plan Shared Sacrifice, Shared Success

# GIVE BACK TO THE RIVER

We've made it easy for your business and customers to invest in the Big Hole River.

Add 1% to your total

We'll send it to the Big Hole Conservation Fund



All proceeds go to on-the-ground restoration projects





#### BIG HOLE RIVER DROUGHT MANAGEMENT PLAN – VERSION 2022 QUICK REFERENCE

SECTION	FLOW TRIGGERS APR. 1 – OCT. 31	TEMPERATURE TRIGGERS
I: Saginaw Bridge on Skinner Meadows Road to North Fork Big Hole River mouth	<ul> <li>160 cfs - April 1 to June 30 target for</li> <li>Arctic grayling spawning.</li> <li>60 cfs - Prepare for Conservation</li> <li>40 cfs - Conservation</li> <li>20 cfs - MFWP River Closure</li> <li><u>Measured at USGS Wisdom Gage</u></li> <li>(06024450)</li> </ul>	Step 1: MFWP Hoot-Owl Fishing Restrictions: Hoot-owl fishing restriction will be in place when daily maximum water temperature reaches or exceeds 73° F (23° C) for at least some period of time during three consecutive days. Hoot-owl
II: North Fork Big Hole River mouth to Dickie Bridge	<ul> <li>450 cfs - April 1 to June 30 target for Arctic grayling spawning.</li> <li>170 cfs - Prepare for Conservation</li> <li>140 cfs - Conservation</li> <li>100 cfs - MFWP River Closure</li> <li><u>Measured at DNRC Big Hole River near</u></li> <li><u>Wise River Gage (41D 08000)</u></li> </ul>	fishing closure prohibits fishing between the hours of 2:00 p.m. and 12:00 a.m. (Midnight). They will remain in place until September 15 or until re- opening criteria are met.
III: Dickie Bridge to MFWP Maiden Rock Fishing Access Site (FAS)	250 cfs – Prepare for Conservation 200 cfs - Conservation 150 cfs - MFWP River Closure <u>Measured at USGS Maiden Rock Gage</u> (06025250)	Step 2: MFWP River Closure Due to High Temperatures: River closure based on water temperature may be implemented if hoot-owl restrictions are inadequate to protect the fishery (e.g., prolonged period where water
IV: MFWP Maiden Rock FAS to Tony Schoonen FAS	290 cfs – Prepare for Conservation 240 cfs - Conservation 190 cfs - MFWP River Closure <u>Measured at USGS Glen Gage</u> (06026210)	temperatures exceed 73° F and forecasts are not favorable for cooler temperature, thermal stress in fish observed by biologist, etc.). Closure will remain in place until September 15 or until re-opening criteria are
V: Tony Schoonen FAS to confluence with Jefferson River	200 cfs – Prepare for Conservation 150 cfs - Conservation 100 cfs - MFWP River Closure <u>Measured at USGS Big Hole River below</u> <u>Hamilton Ditch near Twin Bridges Gage</u> (06026420)	met. Section temperature measured at flow gages (left). <u>MFWP Current Waterbody</u> <u>Restrictions</u> Contact: info@bhwc.org;

Big Hole River Drought Management Plan Big Hole Watershed Committee 406-960-4855

# VOLUNTARY CONSERVATION MEASURES FOR ANGLERS DURING PERIODS OF DROUGHT AND SPAWNING

The following are voluntary actions anglers can take to protect the Big Hole River fishery during periods of drought:

- Use a stream thermometer when you fish, available at your local fly shop. Water temperatures change throughout the day with the coldest water occurring in the early morning. Take the temperature frequently throughout the day and when water temperatures rise above 67F, stop fishing.
- Always keep fish wet and release them quickly.
- Use heavier tippet and land fish quickly. Prolonged fight times in warm water place a high amount of stress on the fish and increase hooking mortality.
- Consider exploring high mountain streams and mountain lakes, where water temperatures stay cooler and give the river fish a break.
- Consider taking a break from fishing during hot weather and find other ways to enjoy the Montana outdoors.

The following are voluntary actions anglers can take to protect the Big Hole River fishery during periods of spawning:

- Choose to fish elsewhere if you can, or for a different species.
- Don't walk or fish in areas with clean gravels (redds).
- Don't use flies, lures, or bait that resemble fish eggs, including glo-bugs, egg flies, florescent colored scuds, or beads.
- Educate yourself. Learn what a redd (fish nest) looks like and how to avoid them.
- Use polarized glasses so you can see areas where fish are spawning.
- Use extra caution when wading through tailouts and shallow riffles, as these are where brown trout spawn, and they are common areas at which to ford the river.

#### NEW REGULATIONS TO PROTECT DECLINING BROWN TROUT POPULATIONS

The following fishing regulations are in effect for the Big Hole River after they were passed by the Montana Fish and Wildlife Commission in August, 2021 and updated in December 2021. These include:

- Catch and release only for brown trout from Dickie Bridge to the river's mouth near Twin Bridges.
- A seasonal fishing closure between the Bureau of Land Management's Maiden Rock site and Brownes Bridge Fishing Access Site from October 1 until March 31.
- Artificial lures and single-pointed hooks only from Dickie Bridge to the river's mouth near Twin Bridges. No treble or double hooks allowed. Anglers may remove treble or double hooks.

For more information about fishing regulations or waterbody closures, visit fwp.mt.gov/fish.



**BIG HOLE RIVER** DROUGHT MANAGEMENT PLAN VERSION 2022

#### **BIG HOLE WATERSHED COMMITTEE**

ADOPTED 1997

Amended 1999, 2000, 2002, 2004, 2005, 2007, 2008, 2012, 2012 v2, 2013, 2014, 2015, 2016, 2022

BHWC Drought Management Plan Amendments are recorded in a separate document.

#### PURPOSE

The purpose of the Big Hole River Drought Management Plan (DMP) is to mitigate the effects of low stream flows and high water temperatures for fisheries (particularly fluvial Arctic grayling) through a voluntary effort among agricultural operations, municipalities, businesses, conservation groups, anglers, and affected government agencies.

# OVERVIEW

The Big Hole Watershed Committee (BHWC) has agreed to this DMP to help mitigate impacts to fish populations during dry years as indicated by flows and temperature. This plan has been designed to consider the interests of all affected parties including ranchers, municipalities, anglers, and conservation groups. It is operated in partnership with Montana Fish, Wildlife and Parks (MFWP) and Montana Department of Natural Resources and Conservation (DNRC). The BHWC agrees that if the DMP is to be successful, it will need broad-based support and understanding. BHWC members are committed to securing the support of their constituencies for the successful implementation of this plan. This plan is intended to be modified based on the lessons learned from research projects, information reported from river gages, and annual reviews of its implementation by the Big Hole River Drought Subcommittee. The DMP is reviewed annually by the BHWC and modified as needed.

# ROLES AND RESPONSIBILITIES

#### Big Hole Watershed Committee roles:

- Educate interested and affected parties.
- Review and adopt DMP annually and update as needed.
- Receive, disseminate, and act on information regarding stream conditions and snowpack levels throughout the year.
- Notify interested and affected parties of implementation and secure support.
- Evaluate the environmental, social, and economic impacts of the plan.

#### Montana Fish, Wildlife and Parks (MFWP), Montana Department of Natural Resources and Conservation (DNRC), and the United State Natural Resource Conservation Service (NRCS) roles:

- Provide accurate, timely information regarding stream conditions and snowpack levels throughout the year.
- Provide technical assistance in reviewing the plan and monitoring its implementation.
- Ensure coordination of efforts among all affected government agencies.
- Provide public notice of MFWP actions for fishing restrictions, closures and re-opening.

#### DEFINITION OF DRY YEAR CONDITIONS AND RECOMMENDED ACTIONS

The BHWC will monitor snowpack levels and forecasted low stream level information provided by the DNRC, USGS, MFWP, and NRCS throughout the year in order to prepare for potential water conservation measures. Streamflow information gathered from gaging stations will be used to initiate specific voluntary actions to conserve water and mitigate the effects of dry year conditions on fish populations from **April 1 through October 31**, **unless otherwise noted**.

# DETERMINING PROXIMITY TO FLOW TRIGGERS

Flow trigger levels are based on the <u>Average Daily Flow</u> measured in cubic feet per second (cfs). Therefore, flow will be reviewed the following day to determine low flow trigger levels and fishing closures. Average daily flow is calculated on the USGS real-time streamflow website: <u>http://waterdata.usgs.gov/nwis/rt</u>

#### MONTANA FISH, WILDLIFE AND PARKS STATEWIDE DROUGHT CLOSURE POLICY

MFWP has a statewide river closure policy that is referenced in each of the Big Hole River sections described in this document, pursuant to <u>ARM 12.5.5</u>. MFWP mandates that river closures follow the local drought plan or, when absent, the Montana Statewide Drought Closure Policy. The <u>MFWP Statewide Drought Policy</u> contains triggers for the Big Hole River in three sections; however, the BHWC Drought Management Plan supersedes the Montana Statewide Drought Policy. Decisions on MFWP river closures and reopening follow the following process:

- 1. Regional Fisheries staff makes recommendations to MFWP Fish Chief based on the Big Hole DMP criteria.
- 2. MFWP Fish Chief gets concurrence from the region Fish and Wildlife Commissioner.
- 3. Restriction/closure rule is signed by the MFWP Director.

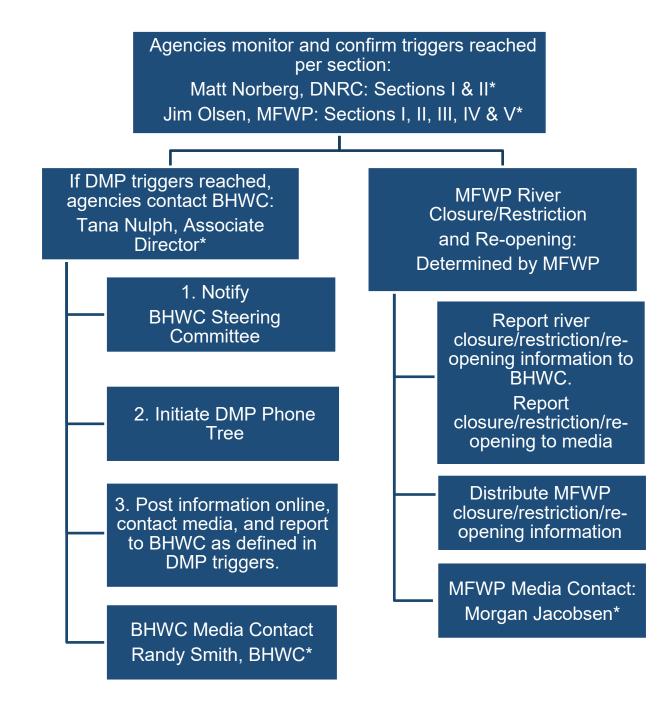
4. River closures or restrictions due to high water temperature are automatically lifted September 15. River closures or restrictions due to low streamflow are automatically lifted October 31. The river may re-open when these dates are reached or when flows and temperatures meet the re-open criteria (whichever comes first).

View current MFWP River closures and re-openings statewide: <u>https://fwp.mt.gov/news/current-closures-restrictions/waterbody-closures.</u>

# HIGH WATER TEMPERATURE AND FISH HEALTH

Water temperature above 70°F is generally considered stressful to salmonids. Warm water temperatures typically occur between July 15 - September 1 in the Big Hole River. Although water temperature above 70°F can occur before and after this period, cooler night temperatures alleviate long periods of warm daytime temperatures. The upper incipient lethal water temperature (e.g., that temperature that is survivable indefinitely for periods longer than one week by 50% of the population) for Arctic Grayling is 77°F (Loher et. al. 1997). Critical thermal maximum temperature for Arctic grayling is 85°F resulting in instantaneous death.

Thermally-induced stress as observed by trained, experienced observers may include any of the following: observed mortality in significant numbers of Age I and older mountain whitefish and other salmonid species in lieu of other logical sources of mortality; outbreaks of stress related piscid diseases such as Bacterial Furunculosis; extraordinary concentrations of fish in thalweg or riffle tailout habitats; hyperactivity (e.g. gasping, rolling, jumping, etc.) of large, concentrated numbers of fish; and frenzied feeding activity at inappropriate times and under inappropriate conditions.



\* See page 13 for contact information.

## **DROUGHT MANAGEMENT PLAN CONSERVATION STEPS**

#### FLOW-BASED STEPS: MAY 1 - OCTOBER 31

- Step 1: **Prepare for Conservation:** DNRC and MFWP officials present data and possible options to the Big Hole Watershed Committee, including CCAA implementation, voluntary irrigation reduction, use of stock water diversions and wells, municipal water use, angling. The DMP Phone Tree is initiated to notify water users and outfitters and anglers of low water conditions and encourage conservation measures. Information will be shared on BHWC's website and social media platforms.
- Step 2: **Conservation**: The DMP Phone Tree is initiated to provide notice to outfitters and anglers requesting they voluntarily limit their angling activities to earlier, cooler hours of the day. The DMP Phone Tree will be initiated to contact water users and encourage water conservation. The BHWC will inform the public of low flow conditions. Information will be shared via BHWC's website, social media platforms, and electronic newsletter.
- Step 3: **MFWP River Closure**: MFWP will close the section to fishing and will not conduct electrofishing surveys (subject to approval or change by the Arctic Grayling Recovery Program). MFWP will provide public notice of fishing closures and encourage public conservation efforts. MFWP will provide river closure/re-opening information to BHWC for distribution. The DMP Phone Tree will be initiated to advise water users and outfitters/anglers of river closure and extreme low water conditions and to encourage conservation measures. Information will be shared on BHWC's website and social media platforms as well as MFWP's website.

#### **TEMPERATURE-BASED STEPS:** MAY 1 - SEPTEMBER 15

- Step 1: MFWP Hoot-Owl Fishing Restrictions: Hoot-owl fishing restriction will be implemented when daily maximum water temperature reaches or exceeds 73° F (23° C) for at least some period of time during three consecutive days. Hoot-owl fishing closure prohibits fishing between the hours of 2:00 p.m. and 12:00 a.m. (Midnight). They will remain in place until September 15 or until re-opening criteria are met. MFWP will provide public notice if hoot-owl restrictions are implemented.
- Step 2: **MFWP River Closure Due to High Temperatures:** River closure based on water temperature will be implemented if hoot-owl restrictions are inadequate to protect the fishery (e.g., prolonged period where water temperatures exceed 73° F and forecasts are not favorable for cooler temperature, thermal stress in fish observed by biologist, etc.). River closure will remain in place until September 15 or until reopening criteria have been met. MFWP will provide public notice if a river closure is implemented.

# **MFWP RE-OPENING CRITERIA**

Sections will be re-opened when average daily flow at the measurement gages is greater than the "Conservation" target for that section\* for 7 consecutive days AND water temperatures are less than 70° F for 3 consecutive days OR on September 15 for temperature-based restrictions and October 31 for flow-based restrictions. MFWP will determine re-opening and will provide public notice. BHWC will share re-opening announcements.

\*Note: In Section V, reopening criteria is set at the section's "Prepare for Conservation" target of 200 cfs.

Unique to Section I and II of the Big Hole River is the implementation of the Candidate Conservation Agreement with Assurances (CCAA) for Arctic grayling restoration. While this program is in place, DNRC and MFWP will be responsible for contacting water users to engage in water conservation measures in response to the flow triggers specified for this reach. All other facets of this plan, including contacting outfitters, sportsmen, and the media, will be implemented as described below. For more information on the CCAA visit <a href="https://www.fws.gov/mountain-prairie/es/species/fish/grayling/CCAA\_June2006.pdf">https://www.fws.gov/mountain-prairie/es/species/fish/grayling/CCAA\_June2006.pdf</a>.

#### SECTION I: SAGINAW BRIDGE ON SKINNER MEADOWS ROAD TO MOUTH OF THE NORTH FORK OF THE BIG HOLE RIVER

#### SECTION I FLOW TARGETS: APRIL 1 - OCTOBER 31

Monitored at the <u>USGS Wisdom Gage: "Big Hole River bl Big Lake Cr at Wisdom", Number</u> 06024450

160 cfs *April 1 - June 30.* Water users with CCAA site plans will be required to implement their plans. Non-CCAA water users will be contacted by DNRC and MFWP, advised of flow conditions and encouraged to implement conservation measures. This target is specific to the CCAA goal of maintaining spawning and rearing flow requirements for Arctic grayling.

July 1 – October 31

- 60 cfs **Prepare for Conservation**
- 40 cfs Conservation
- 20 cfs MFWP River Closure

**Re-opening criteria:** 40 cfs for 7 consecutive days AND water temperatures less than 70° F for 3 consecutive days.

# NOTES

The wetted stream perimeter (i.e., flow below which standing crops of fish decrease) in Section I of the Big Hole River is 60 cfs (DNRC 1992). While this flow may be reasonable to maintain in ample moisture years and should be the goal for flow preservation efforts, in most years it is not a realistic quantity. Fish population and flow data indicate 40 cfs is feasible to maintain while still sufficient to protect the Arctic grayling population. A minimum survival flow of 20 cfs will provide flows necessary to maintain a wetted channel, provide connectivity to thermal or flow refugia habitats, and ensure survival of the grayling population during brief, critical periods.

#### SECTION II: MOUTH OF THE NORTH FORK OF THE BIG HOLE RIVER TO DICKIE (DICKEY) BRIDGE

#### SECTION II FLOW TARGETS: APRIL 1 - OCTOBER 31

Monitored at DNRC Dickie Bridge Gage: "Big Hole River near Wise River", Number 41D 08000

450 cfs *April 1 - June 30.* Water users with CCAA site plans will be required to implement their plans. Non-CCAA water users will be contacted by DNRC and MFWP, advised of flow conditions and encouraged to implement conservation measures. This target is specific to the CCAA goal of maintaining spawning and rearing flow requirements for Arctic grayling.

July 1 - October 31

- 170 cfs **Prepare for Conservation**
- 140 cfs **Conservation**
- 100 cfs **MFWP River Closure**

**Re-opening criteria:** 140 cfs for 7 consecutive days and water temperatures less than 70° F for 3 consecutive days.

#### SECTION III: DICKIE BRIDGE TO MFWP MAIDEN ROCK FISHING ACCESS SITE

FLOW TARGETS: MAY 1 - OCTOBER 31

Monitored at <u>USGS Maiden Rock Gage: "Big Hole River at Maiden Rock nr Divide", Number</u> 06025250

- 250 cfs **Prepare for Conservation**
- 200 cfs **Conservation**
- 150 cfs **MFWP River Closure**

**Re-opening criteria:** 200 cfs for 7 consecutive days and water temperatures less than 70° F for 3 consecutive days.

#### SECTION IV: MFWP MAIDEN ROCK\* FISHING ACCESS SITE TO MFWP TONY SCHOONEN FISHING ACCESS SITE

#### FLOW TARGETS: MAY 1 - OCTOBER 31

Monitored at USGS Glen Gage: "Big Hole River near Glen", Number 06026210

- 290 cfs **Prepare for Conservation**
- 240 cfs **Conservation**
- 190 cfs **MFWP River Closure**

**Re-opening criteria:** 240 cfs for 7 consecutive days AND water temperatures less than 70° F for 3 consecutive days.

\*Note: Section IV begins at the Montana Fish, Wildlife and Parks Maiden Rock ("Maidenrock") Fishing Access Site also known as "the Dead Zone", not the Bureau of Land Management Maiden Rock Fishing Access Sites.

#### SECTION V: TONY SCHOONEN FISHING ACCESS SITE TO CONFLUENCE OF THE BIG HOLE RIVER WITH THE JEFFERSON RIVER

#### FLOW TARGETS: MAY 1 - OCTOBER 31

Monitored at USGS "Big Hole R bl Hamilton Ditch nr Twin Bridges", Number 06026420

- 200 cfs **Prepare for Conservation**
- 150 cfs **Conservation**
- 100 cfs **MFWP River Closure**

**Re-opening criteria:** 200 cfs for 7 consecutive days AND water temperatures less than 70° F for 3 consecutive days.

# MONITORING AND NOTIFICATION PROCESS

#### MFWP and DNRC Responsibilities

- In river sections 1 and 2, MFWP and DNRC are responsible for monitoring streamflows and water temperatures among CCAA-enrolled landowners, and for initiating conservation actions when triggers are met, and in accordance with site specific management plans.
- DNRC will provide a precipitation and streamflow report at each of BHWC's 9 monthly meetings (3rd Wednesday except July, December, January). Reports will provide up-todate information and forecasting for snowpack, climate, water temperature, and flows.
- MFWP will monitor stream gages and make timely public notification, via press release, of fishing closures due to temperature or flow triggers. MFWP will also post public signage of closures at fishing access sites, and remove the signage upon re-opening.
- As water quality trends decline, DNRC and MFWP will make efforts to communicate early with BHWC about impending closures.

#### **Big Hole Watershed Committee Responsibilities**

- Big Hole River Drought Subcommittee: BHWC will coordinate the Big Hole River Drought Subcommittee, tasked with stewarding the Drought Management Plan and approving it on an annual basis.
- Payment for gages: BHWC believes stream gage infrastructure is a critical service and those of the Big Hole should be funded by federal and state budgets. In the absence of such funds, BHWC will secure funding to support the annual operation and maintenance of the Big Hole River's stream gage network.

#### Communications:

- Monthly: Streamflow/precipitation reports. BHWC will maintain a standing agenda item at each Big Hole Watershed Committee monthly meeting for a precipitation and streamflow report by the DNRC. These reports will include notification of impending dry year conditions. These reports will be published in monthly meeting minutes.
- Weekly: Notifications of Conditions. During the water year (April October), the BHWC will provide weekly updates via email, social media, website, and text message regarding water supply and river conditions.
- Periodic: Trigger-based or other Notifications. When flow or temperature triggers are reached, or impending conditions dictate, BHWC will use its communication platforms to inform ranchers, municipalities, outfitters, and conservation and sportsmen groups and the general public.
  - Spring flow conditions may also trigger notifications as they relate to sediment movement, or spawning habitat for spring and early summer spawners.

- At its discretion, BHWC will issue press releases and will work with local media outlets (e.g., Montana Standard, Dillon Tribune, KXLF/KBZK, etc.) to provide context for Drought Management updates.
- Information will also be provided to the general public about actions people can take to mitigate damage from drought years including, but not limited to:
  - Voluntary reduction of irrigation and diversion stock watering during critical times;
  - Water conservation policies by municipalities and industries during sensitive times;
  - Emergency water reduction policies by municipalities and industries during critical times;
  - Reduced recreation uses during sensitive times;
  - Elimination of fall recreation uses at critical times; and
  - Encourage Big Hole watershed residents and Butte rate payers to reduce unnecessary water use including lawn watering, small irrigation systems, washing, etc.
- When significant changes to the Drought Management Plan are made, the BHWC will issue an update in the form of a mailing (hard copy and electronic) that will include: a copy of the most recent Drought Management Plan, flow forecasting, updates on water conservation programs and assistance, and other related news items.
  - The BHWC will hold space at our open public meetings to conduct discussions with all parties, as needed, concerning the Drought Management Plan and its implementation.

# RESOURCES

# **INFORMATION CONTACTS**

Randy Smith, BHWC Chair/DMP Contact: 406-925-1545; 6sranch@3rivers.net

Pedro Marques, BHWC Executive Director: 406-552-2369; pmarques@bhwc.org

Tana Nulph, BHWC Associate Director: 406-267-3421; tnulph@bhwc.org

#### Montana Department of Fish, Wildlife & Parks (MFWP)

Jim Olsen, Big Hole River Fisheries Biologist: 406-533-8451; jimolsen@mt.gov

Morgan Jacobsen, Media Contact: 406-577-7891; morgan.jacobsen@mt.gov

#### Montana Department of Natural Resources and Conservation (DNRC)

Matt Norberg, Hydrologist: 406-444-6041; mnorberg@mt.gov

# RESOURCES

Montana State Library County Drought Status Maps: https://mslservices.mt.gov/Geographic\_Information/Maps/drought/

USGS Real-Time Flow Data – Current Conditions, Montana: <u>http://waterdata.usgs.gov/mt/nwis/current?type=flow</u>

DNRC Stream and Gage Explorer (StAGE): <u>https://gis.dnrc</u>. mt.gov/apps/stage/

NRCS Snowpack Monitoring: http://www.wcc.nrcs.usda.gov/snow/

Montana Bureau of Mines SWAMP Gage List (Wise River Gages): <a href="http://data.mbmg.mtech.edu/swamp/reports/GageList.asp">http://data.mbmg.mtech.edu/swamp/reports/GageList.asp</a>

Montana Fish, Wildlife & Parks Current Waterbody Restrictions: <u>https://fwp.mt.gov/news/current-closures-</u> <u>restrictions/waterbody-closures</u> Fisheries, Water, and Drought Management: <u>https://fwp.mt.gov/conservation/fisheries-management/water-management/drought</u>

Montana Natural Resource Information System (NRIS): <u>https://nris.msl.mt.gov/</u>

Big Hole Watershed Committee: <u>https://bhwc.org/</u>

Real-time Big Hole River Conditions: <u>https://bhwc.org/river-conditions</u>

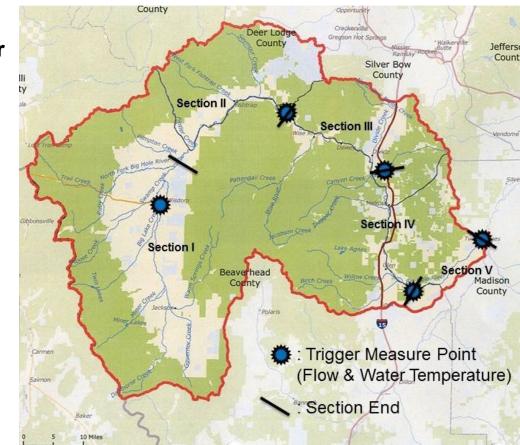
Big Hole River Conservation Fund: <u>https://bhwc.org/1-for-the-river</u>

BHWC Drought Management Plan Phone Tree (DMP Phone Tree): The DMP Phone Tree is a separate document that lists the phone contacts made when DMP triggers are reached. It is used by phone tree leaders.

BHWC Drought Management Plan Amendments: The DMP is reviewed annually. When changes are made to the plan, they are recorded in the amendments with reasoning for the change. The amendments are provided in a separate document.



BIG HOLE RIVER DROUGHT MANAGEMENT PLAN 2022 MAP OF RIVER SECTIONS AND MEASUREMENT POINTS



Big Hole River Drought Management Plan 2022

**River Sections** 

The map above marks the 2022 Big Hole River Drought Management Plan river sections and their measurement points. The Big Hole Watershed is outlined in red. The river sections are marked as Sections I-V. The Big Hole River originates in Section I and flows downstream to Section V.